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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
EXAMINER				
YOUNKINS, KAREN L				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,006

Applicant(s)

GRECH ET AL.

Examiner

KAREN YOUNKINS

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/1/2006 (preliminary amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 55-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 55-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/20/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the preliminary amendment dated 5/1/2006. By way of the amendment, claims 1 and 55-74 are now pending.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The full name of each inventor (family name and at least one given name together with any initial) has not been set forth. The current Oath/Declaration only identifies 4 inventors, while the Application Data Sheet names 9 inventors.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the reference line as set forth in claim 67 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because in figure 8 the reference character 64, described in the specification as being a flexible cable, appears to be referencing a stray line connected to another stray line. The lines are not in connection with the waste ball valve as disclosed in the specification.

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the current drawings contain what appear to be pictures, an excess of stray markings, and excess descriptive text such as in figure 8. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: Page 2 line 17 appears as if the line should read "driven by a flexible cable" instead of "driven by a flexible a cable". Page 7 line 8 appears as if the line should read "a shroud 16" instead

of "a shroud or shroud 16". On page 9, the reference character '44' is used to reference both the waste valve assembly and a central portion. Further, figure 13a is not set forth in the brief description of the drawings.

Appropriate correction is required.

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Support for the language "wherein the actuator is mounted to the flush toilet for rotation about a first axis and the waste ball valve assembly is mounted to the flush toilet for rotation about a second axis, the first axis being substantially perpendicular to the second axis" as set forth in claim 59, "open rim operable to prevent splashing" as set forth in claim 63, and "a reference line" as set forth in claim 67 was not found.

Claim Objections

8. Claim 61 is objected to because of the following informalities: The language "the waste valve assembly is coupled to driven by a waste valve arm" as set forth in claim 61 is not in proper idiomatic English. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 60-61 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 60 recites the limitation "the flexible cable" in page 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 62-68 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,715,544 to Huffman et al. (Huffman).

14. Huffman teaches a bowl assembly defining a bowl (12) having a discharge outlet (18) at a lower end, and a ledge (22) circumferentially extending about a substantial portion of the bowl. A nozzle (see figure 6) is mounted to the bowl assembly and positioned at a rear portion of the bowl (see figure 1). The nozzle is operative to produce a first flow of water in a first circumferential direction about the bowl and a second flow of water in a second circumferential direction about the bowl, where the second circumferential direction being opposite to the first circumferential direction. The ledge 'cascades' the first and second flows of flush water down the bowl as the first and second flows of water move in the first and second circumferential directions, respectively, as claimed. The first and second flows of water create a symmetrical flow pattern, see column 1 lines 38-45. The bowl assembly further includes an open rim (top surface of 10) as claimed, the nozzle is positioned below the open rim (see figure 1). The first and second flows of water will converge at an 'imaginary line' that passes

through the nozzle and a front portion of the bowl directly opposite the nozzle. Further, the imaginary line defines a tangent to the bowl located approximately 120 degrees clockwise from the nozzle. The imaginary line is offset from a reference line passing through the nozzle and a front portion (any other front portion than the location of convergence) of the bowl directly opposite the nozzle.

15. The initial statement of intended use (claim 62 line 1) , and all other functional implications related thereto, have been carefully considered but do not appear to impose any patentably distinguishing structure over that disclosed by Huffman.

16. Claims 69-71 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 3,599,248 to Fulton et al. (Fulton).

17. Fulton teaches a flush toilet comprising a base, a bowl assembly defining a bowl (C), the bowl assembly mounted to the base and defining a discharge opening at a lower end of the bowl, a waste ball valve assembly (21) mounted to the flush toilet, and a common sealing member (A) as claimed. See figure 1. The common sealing member includes a generally horizontal/first portion (10) and a cylindrical/second portion (11) upwardly extending from the generally horizontal portion as claimed.

18. All functional implications have been carefully considered but do not appear to impose any patentably distinguishing structure over that disclosed by Fulton.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. Claims 72 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulton.

21. In reference to claim 72 and as previously discussed in pp-17, further Fulton teaches the first portion being constructed of the relatively incompressible material rubber.

Fulton fails to show the second portion constructed of a relatively compressible material. Fulton does not disclose the material of construction of the second portion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the second portion out of a relatively compressible material as claimed to effectively conform between the two components to make a seal as the second portion is disposed between two components of the device as a seal.

22. In reference to claim 74, Fulton teaches a portion of A being 'treated to reduce a coefficient of friction' as the material has a low coefficient of friction, see column 2 lines 7-9.

Fulton fails to show an underside of the first portion treated to reduce a coefficient of friction.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have also chosen a material with a low coefficient of friction for an underside of the first portion, effectively treated to reduce a coefficient of friction, to reduce friction during the undersides contact with the ball valve.

23. Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fulton in view of USPN 5,974,596 to Strzok.

24. As previously discussed in pp-17 above, further Fulton fails to show the first portion laminated to the second portion. Instead, Fulton teaches that the first and second portions are bonded per se and does not disclose a particular bonding method, see column 2 lines 1-6.

Strzok teaches laminating portions is a well known method of bonding known in the art of seals, see column 6 line 14-20.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have laminated the first and second portions as taught by Strzok as the method of bonding the first and second portions of Fulton to ensure a secure connection between the two portions.

25. Claims 1, 55, and 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulton in view of USPN 3,308,481 to O'Brien et al. (O'Brien).

26. With respect to claims 1, 55, 58-59 Fulton teaches a bowl assembly defining a bowl (C) and a discharge opening at a lower end of the bowl (see figure 1), a waste ball valve assembly (21) mounted to the flush toilet, a water valve assembly (24, and see claim 1) including a water valve (37) that is operable in a water valve open condition and a water valve closed condition via the use of 38. A common actuator (38) controls both the waste ball valve assembly and the water valve assembly, see column 2 lines 52-53. The actuator (38) is mounted to the flush toilet for rotation about a first axis and the waste ball valve assembly is rotatably mounted to the flush toilet for rotation about a

second axis, the first axis is substantially perpendicular to the second axis. The actuator (38) is positioned proximate a front portion of the flush toilet and the water valve assembly is positioned proximate a rear portion of the flush toilet.

Fulton fails to show the actuator movable from a first position to an intermediate position and from the intermediate position to a second position such that in the first position the waste ball valve assembly closes the discharge opening and the water valve assembly is in the closed condition, in the intermediate position the waste ball valve assembly closes the discharge opening and the water valve assembly is in the open position for adding water to the bowl, and in the second position the waste ball valve assembly opens the discharge opening and the water valve assembly is in the open position for flushing the bowl. Instead, Fulton only discloses the operation of the actuator as it controls the waste ball valve and water valve assemblies per se.

O'Brien teaches a toilet actuator having a first position (figure 3), an intermediate position (figure 4), and a second position (figure 5). In the first position the flush valve is closed, the discharge opening is closed and the water assembly is in the closed condition, in the intermediate position the flush valve closes the discharge opening and the water valve assembly is in the open position for adding water to the bowl, and in the second position the flush valve assembly opens the discharge opening and the water valve assembly is in the open position as claimed. See figures 3-5.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Fulton to actuate the waste ball

valve and water valves as claimed as a result of the actuator moving from first, intermediate, and second positions as taught by O'Brien to save water.

27. In reference to claim 57, Fulton fails to show the actuator being a foot actuated lever. Instead, Fulton teaches a hand actuated lever. O'Brien teaches a foot actuated lever. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the actuator of Fulton to be a foot actuated lever instead of a hand actuated lever as a design choice for lever actuation well known in the art as taught by O'Brien.

28. The initial statement of intended use (claim 1 line 1) , and all other functional implications related thereto, have been carefully considered but do not appear to impose any patentably distinguishing structure over that disclosed by Fulton as modified above.

29. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fulton and O'Brien as applied to claim 1 above, and further in view of USPN 5,060,320 to Sargent et al. (Sargent).

30. As previously discussed in pp-26 above, further Fulton fails to show the actuator interconnected to the waste ball valve assembly and the water valve assembly by a flexible cable.

Sargent teaches that flexible cables (122, 124) used to interconnect actuators (110, 112) to valves (64, 66). Sargent teaches the use of these flexible cables provides

fail safe operating means as the wires will close the toilet bowl outlet and water flow control valves in the event that the standard closure means fail.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have connected the actuator to the waste ball valve assembly and the water valve assembly by a flexible cable to provide fail safe operating means as taught by Sargent.

31. Claims 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fulton and O'Brien as applied to claim 1 above, and further in view of USPN 5,906,011 to Fleming.

32. Fulton as modified in pp-26 above fails to show a flexible cable attached to a water valve drive arm for driving the water valve assembly between the open and closed conditions. Fulton further fails to show the waste valve assembly coupled to be driven by a waste valve drive arm, the waste valve drive arm being driven by rotation of the water valve drive arm.

Fleming teaches that flexible cables (68, 77) may be attached to a 'drive arms' to actuate a toilet's water valve and/or waste valve, see column 4 lines 7-11.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided flexible cables and drive arms coupled to drive the water and waste valves as claimed to allow for adjustment of the actuating mechanism, as flexible cables may be easily adjusted.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Applications 2004/0088783 and 2003/0000008 teach similar RV toilet constructions. USPN 3,860,973 teaches an actuating arm that moves to operate a water valve in a toilet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAREN YOUNKINS whose telephone number is (571)270-7417. The examiner can normally be reached on Monday through Friday 7:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571)272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/540,006
Art Unit: 3751

Page 13

/K. Y./
Examiner, Art Unit 3751

/Gregory L. Huson/
Supervisory Patent Examiner, Art Unit 3751